

## New and Little-known Utah Dolichopodidae<sup>1</sup> (Diptera).

By F. C. HARMSTON and G. F. KNOWLTON<sup>2</sup>.

The following report includes descriptions of two apparently undescribed long-legged flies, the previously undescribed female of *Parasyntormon hendersoni* H.-K., and the male of *Polymedon castus* Wheeler.

### *Dolichopus vernaac* n. sp.

♂. Length 5.6 mm.; of wing, 4.8 mm. Face rather wide and short, leaving lower corners of eyes exposed, covered with golden-brown pollen; front shining blue, with purplish reflections, lightly dusted with yellow pollen which is thicker along orbits; palpi and proboscis black; antennae (fig. A5) black, third joint scarcely longer than wide; lateral and inferior orbital cilia entirely black.

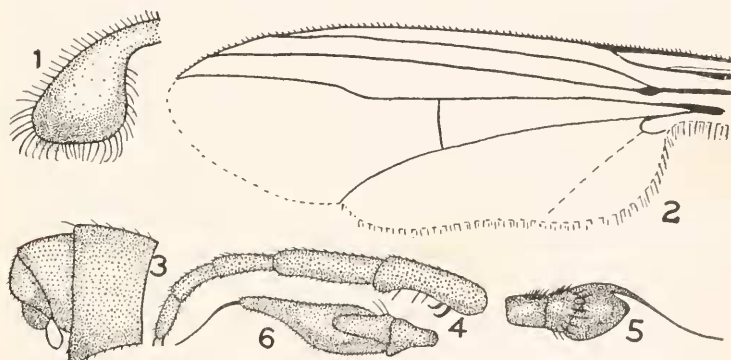


Fig. A. *Dolichopus vernaac* n. sp., Male, 1-2, 5; *Syntormon uintaensis* n. sp., 3-4, 6.

Thorax shining green; pleurae green with bronze reflections, dulled somewhat with whitish pollen; abdomen dark green, shining, fifth segment with pronounced bronze reflection, all segments noticeably free from pollen; hypopygium black, its lamellae (fig. A1) brownish, scarcely jagged at tip, the wide, blackish, somewhat truncate apical margin fringed with long black hairs.

Coxae black, fore pair with black hairs on anterior surface, the bristles at tip black, strong; fore femora black with narrow

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yellow tip; middle femora black at base and along lower edge for one-half their length; hind femora black at base, tip, and along lower and upper edges, leaving an oblong, dark yellow spot near the middle from which arise the preapical bristles; middle femora with four preapical bristles; hind femora with six preapical bristles, ciliated on lower inner edge with black hairs about one-third as long as the width of femora; fore and middle tibiae yellow, middle pair with three bristles below, one at apex, one near apical third, the other near middle; posterior tibiae somewhat thickened, black on apical third; fore tarsi approximately equal to their tibiae; middle tarsi about one and one-third times length of corresponding tibiae; both fore and middle tarsi black from the tip of first joint; hind tarsi approximately one and one-half times length of hind tibiae, wholly black; calypters yellow with thick black cilia; halteres yellow.

Wings (fig. A2) grayish, costa somewhat enlarged at tip of first vein.

♀. Face wider than in male, its pollen silvery; third antennal joint shorter, more rounded at tip; middle femora with three preapical bristles; hind femora with four to five preapical bristles; otherwise approximately as male in general coloration of body and legs.

Described from male *holotype* and female *allotype* taken at Woodruff, UTAH, June 6, 1939, by G. F. Knowlton and F. C. Harmston; also eleven male and eleven female *paratypes* taken in the same locality, June 11, 1939 by F. C. Harmston and V. H. Harmston.

Holotypes and allotypes of the two species here described as new are deposited in the U. S. National museum; paratypes in the insect collections of the Utah Agricultural Experiment Station, Academy of Natural Sciences, Philadelphia, and the California Academy of Sciences.

**Syntormon uintaensis** n. sp.

♂. Length 3.6 mm., of wing, 4.3 mm. Face moderately wide, narrowed in the middle, covered with silvery pollen which hides the ground color; palpi brownish with silvery pollen and minute white hairs; front brown, dull; antennae (fig. A6) black, second joint overlapping the third on inner side to near its middle, third joint about three times as long as wide, densely pubescent; arista apical, approximately one-half length of third joint; upper orbital cilia black, lower cilia white, back of which are other similarly colored cilia.

Dorsum of thorax and the pleurae brown with coppery reflections, dulled with whitish pollen, the dorsum with indistinct brownish vittae; scutellum with one pair of large bristles and a few tiny pale hairs on the margin (the latter rather difficult to discern). Abdomen nearly black with dark coppery reflections and white pollen, the last segment having distinct greenish reflections; hypopygium (fig. A3) nearly concealed, lamellae tiny, pale, fringed with delicate yellowish hairs.

All coxae and femora blackish dulled with white pollen, the tips of the fore and hind femora narrowly yellowish; middle femora with apical one-fourth yellowish; fore coxae clothed on anterior surface with fine white hairs, those near tip longer; middle femora with a row of approximately eight bristles of increasing length on lower, inner surface; all tibiae dark yellow and without unusual bristles; fore and middle tarsi black from tip of first joint, hind tarsi (fig. A4) entirely black, the first joint noticeably hollowed on lower surface, with two hook-like bristles near the base and a few smaller, straight bristles beyond; joints of fore tarsi as 32-11-9-8-9, of middle pair as 40-16-10-8-8 and of hind tarsi as 20-22-14-10-10; halteres and calypters yellow, the latter with narrow brown tip and brownish cilia which appear yellowish in certain lights.

Wings without spots but tinged with brown, especially along the costal margin.

Described from ten males and seven females; male *holotype* and female *allotype* taken at Altonah, UTAH, May 9, 1939, five male and four female *paratypes* taken same date and locality, one male and one female *paratype* taken at Portage, Utah, May 1, 1939 and three male and one female *paratypes* from Grouse Creek, Utah, August 30, 1939, all specimens taken by G. F. Knowlton and F. C. Harmston.

*Taxonomy.* This interesting species belongs in the group which includes *Syntormon strataegus* Wheeler and *S. tricoloripes* Curran; all possess a pair of hook-like bristles on the lower surface of the posterior basitarsi. *S. uintaensis* n. sp. is easily separated from *tricoloripes* and *strataegus* by the greatly elongated third antennal joint, which in the latter two species is but slightly longer than wide. The hind femora of *uintaensis* are wholly black except for the narrow yellowish tip, whereas in *strataegus* they are yellow, blackened only at base and on upper apical portion. Female very closely resembles female of *strataegus*.

The three species discussed above can be separated by the following key:

1. Antennal arista equal to or exceeding length of third antennal joint .....2  
    Antennal arista approximately one-half length of third antennal .....*uintaensis* n. sp.
2. Posterior femora yellowish, blackened only at base and on upper apical margin; middle femora yellow with five bristles near middle of lower edge...*stratacagus* Wheeler.  
    Posterior femora black; middle femora black except apical third, its lower surface with seven or eight bristles near middle .....*tricoloripes* Curran.

POLYMEDON CASTUS Wheeler, Proc. Calif. Acad. Sci. 2:6. 1899.

The writers have failed to find a description of the male of *P. castus* in the literature; for this reason the following description and notes concerning this species are given.

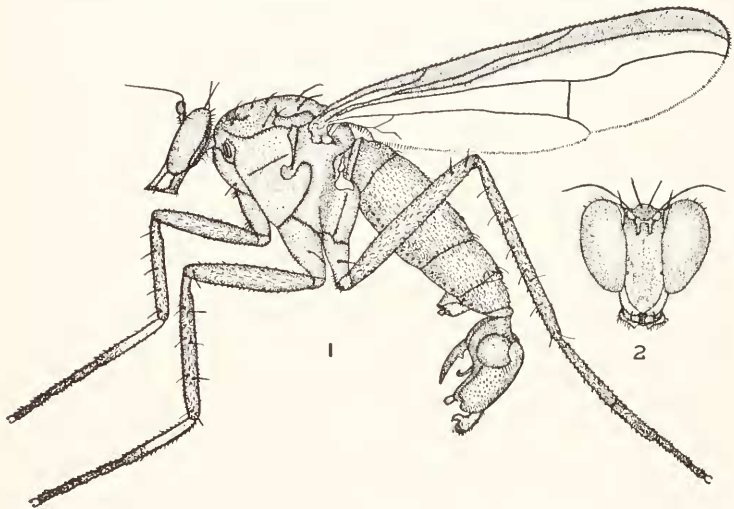


Fig. B. *Polymedon castus* Wheeler. Male, 1-side view; 2-front of head.

♂. Length 8.8 mm.; of wing (fig. B1) 8.5 mm. Face (fig. B2) wide, a little bulged near its middle, sides nearly parallel, thickly covered with golden-yellow pollen, pointed below, extending below the lower corner of the eyes a distance equal to its width; front dark metallic green with bronze reflections, lightly dusted with whitish pollen; palpi yellow, with minute

white hairs on the surface and a long, strong black bristle near their tips; proboscis brown, fringed with a row of tiny, white cilia; upper orbital cilia black, the inferior cilia and whiskers white; antennae with first joint entirely yellow, the second brownish, the third black, rounded at tip; arista black, about twice the length of antennae.

Thorax shining green with bronze reflections, the anterior and lateral margins dulled with white pollen; pleurae densely covered with white pollen, entirely hiding the ground color; abdomen shining bronze-green, incisures black, not shining, the lateral margins and venter dulled with whitish pollen; hypopygial lamellae yellow with black border, the fringe and hairs of the surface minute, yellow.

Fore coxae yellow with white pollen, their anterior surfaces covered with fine black hairs and stronger bristles near base and at tip; middle and hind coxae black with white pollen, the former with a strong black bristle on their anterior surface, the latter with a similar bristle on the outer surface; femora yellow, the middle pair with one preapical bristle, the posterior pair somewhat arcuated and with two preapical bristles; tibiae yellow, of plain structure; fore and middle tarsi yellow, blackened from the tip of first joint, posterior tarsi wholly black, the basitarsi slightly thickened; calypters and halteres brownish-yellow, the former with black cilia.

Description made from seven *plesiotype* males, five of which were taken in Zions National Park, and two at Leeds, UTAH, on September 13, 1939, by G. F. Knowlton and F. C. Harmston. Both sexes of this species, together with those of *P. nimius* Aldrich and *Liancalus hydrophilus* Aldrich were found in moderate abundance resting upon cool, moist rocks around small shaded waterfalls in the two localities listed above. *P. nimius* has also been collected by the writers in Utah at Moab and Clear Creek Canyon (Sevier County), *L. hydrophilus* being common throughout the state.

PARASYNTORMON HENDERSONI Harmston and Knowlton,  
Ent. News. 50: 265, 1939.

♀. Length, 2.5 mm. Face wide, its ground color hidden by greyish pollen, sides nearly parallel; front concolorous with face; palpi nearly twice the size of those of male, blackish, their surface covered with black hairs; antennae shorter and darker than in male, the third joint as broad as long, densely pubescent; arista dorsal, nearly twice the length of antenna.

Thorax, abdomen, and legs colored as in male; fore coxae with minute white hairs upon their anterior surfaces, a few blackish bristles at tips.

Wings broader than in male, the anal angle more prominent.

Described from three females taken at Monticello, UTAH, August 18, 1939, by G. F. Knowlton and F. C. Harmston.

*Taxonomy.* The female of *Parasyntormon hendersoni* H.-K., closely resembles that of *P. montivagum* Wheeler. The writers have not examined a female of the latter species but it would appear from the description that the species differ in the color of the hairs of fore coxae, which are yellow in *hendersoni* and black in *montivagum*.

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### **The Species of *Polyphylla* in America, North of Mexico (Coleoptera: Scarabaeidae).**

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The appearance of the new supplement to the Leng Catalogue by Blackwelder (1939) has revealed several papers that have been heretofore overlooked. Among these is one by Kuntzen<sup>1</sup> in which the American species of *Polyphylla* are arranged, according to the Rassenkreis concept, into two Rassenkreis species. It is the purpose of this brief paper to point out that this concept is unadaptable to the genus *Polyphylla*, as it is now understood, and that only lack of knowledge or disregard of biological, ecological, morphological and distributional data, concerning American species, would prompt an author to arrange our forms into Rassenkreis species as done by Kuntzen.

Kuntzen utilizes only Casey's Memoir (1914) and Leng's Catalogue (1920) as a basis for his arrangement. It is apparent that the most fundamental and critical paper on American *Polyphylla* by Fall (1928), published five years prior to Kuntzen's contribution, was overlooked. If Kuntzen had been acquainted with this paper he probably would not

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<sup>1</sup> Kuntzen, H., 1933, Aus den Verbreitungstatsachen mitgefolgerte neue Auffassungen über das System einiger Scarabaeidengenera vornehmlich der paläarktischen Region. Mittl. Zool. Mus. Berlin, 19:458-472.